

Applicant : Lawrence W. Yonge III et al.
Serial No. : 10/695,371
Filed : October 21, 2003
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Attorney's Docket No.: 04838-075001

Amendments to the Drawings:

The attached replacement sheet of drawings includes changes to Fig. 1 and replaces the original sheet including Fig. 1.

In Figure 1, descriptive legends from the original specification have been added, as requested.

Attachments following last page of this Amendment:

Replacement Sheet (1 page)

REMARKS

Substance of Interview

Applicant's representatives Elliott Mason (Reg. No. 56,569) and Eric Keller thank the Examiner for the telephone interview on December 14, 2007. In accordance with MPEP Section 713.04, the substance of the interview is included herein. No exhibits were shown.

The objections to the specification and drawings were discussed. The Examiner agreed to withdraw the objection to the specification and to FIG. 2. The 35 U.S.C. 112 rejection was discussed, but no agreement was reached with respect to this rejection. The rejections of claims 1, 5, 9, and 23 were discussed. Partial agreement was reached with respect to the prior art rejections in that the Examiner agreed to reconsider the rejection of claim 1.

Allowable Subject Matter

On page 12 of the Office Action, claims 12, 13, 15, 16, 18, 19, 28, 29, and 35 are indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Objections to the Specification

On page 2 of the Office Action, the Examiner objects to the specification because “providing CSMA communication during times outside of the contention free intervals’ fails to disclose in specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed.”

During the interview, the Examiner withdrew the objection to the phrase “providing CSMA communication during times outside the contention free intervals.”

The Applicant has endeavored to determine the presence of possible minor errors as requested by the Examiner.

Objections to the Drawings

On page 2 of the Office Action, the Examiner objects to Figures 1-2 as lacking “descriptive legends.”

During the interview, the Examiner withdrew the objection as to Figure 2. Figure 1 has been corrected in compliance with 37 C.F.R. 1.121(d).

Objections to the Claims

On page 3 of the Office Action, the Examiner objects to claims 1-43 under 37 C.F.R. 1.75.

The claims 1, 2, 5, and 19 have been amended in accordance with the Examiner's suggestion. Claims 3-4, 6-18, and 20-43 depend from claims 1, 2, 5, and 19. The Applicant respectfully requests that the objection to these claims be withdrawn.

35 U.S.C. 112 Rejections

Claims 2-4, 27, and 38 stand rejected under 35 U.S.C. 112 as indefinite.

On page 4 of the Office Action, the Examiner states that in claim 2, the phrase “‘distributing control over initiation and makeup’ fails to particularly point out where distributing control come from.”

Applicant respectfully submits that the recitation of “distributing control over initiation and makeup of transmission within the contention free intervals to a plurality of stations so that any of the plurality of stations can independently initiate transmission within the contention free interval” particularly points out and distinctly claims the subject matter which the Applicant regards as his invention, and can be clearly understood as referring to a method in which control over initiation and makeup of transmission within the contention free intervals is distributed to a plurality of stations so that any of the plurality of stations can independently initiate transmission within the contention free interval. If the Examiner disagrees, Applicant respectfully requests an explanation as to why the claim is considered to be indefinite for not particularly pointing out

and distinctly claiming the subject matter which *the Applicant regards as his invention*, so Applicant has an opportunity to respond. .

On page 4 of the Office Action, the Examiner states that on line 3 of claim 27, the phrase “‘the short time interval’ lacks antecedent basis because it is not know what the ‘the short time interval’ applicant is referring.”

The phrase “the short time interval” in claim 27 has been amended to “one of the short time intervals” to indicate that the antecedent basis is provided on line 1 of claim 27, which states that “short time intervals are provided between successive transmissions within the contention free interval.”

On page 4 of the Office Action, the Examiner states that on line 2 of claim 38, the phrase “‘the power cycle’ has no antecedent basis.”

Claim 38 has been amended to explicitly indicate that “the power cycle of the AC power line” has an antecedent basis in the “alternating current (AC) power line” recited in claim 37, on which claim 38 depends. The specification makes clear that the AC power line is associated with a power cycle. For example, page 23 lines 22–24 of the specification describes that “For communication over an alternating current (AC) power line, the contention free intervals may be approximately periodic, and approximately synchronized with the 50 or 60 Hz power cycle.”

Double Patenting Rejection

The Examiner rejected claim 1 under the judicially created doctrine of obviousness-type double patenting over claim 1 of U.S. Patent 6,907,044. Applicant will consider filing a terminal disclaimer in compliance with 37 CFR 1.321 to overcome the provisional rejection upon indication of allowable subject matter.

Prior art Rejections

Claims 1-11, 14, 17, 20-21, 23-27, 30-31, 33-34, and 37-54 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yonge et al. (U.S. 6,909,723) in view of Sugar et al. (U.S. 2002/0061031). Claims 22 and 36 stand rejected under 35 U.S.C. 103(a) as unpatentable over

Yonge et al. in view of Sugar et al. as applied to claims 1 and 5, and further in view of Haigh (U.S. 5,793,861). Claim 32 stands rejected under 35 U.S.C. 103(a) as unpatentable over Yonge et al. in view of Sugar et al. as applied to claims 1 and 5, and further in view of Hong et al. (U.S. 2005/0192011).

Independent claims 1 and 5

Applicant submits that no proper combination of Yonge et al. and Sugar et al. teaches or suggests at least that “the first station can be any of the plurality of stations,” as recited by claim 1, or “distributing control over the initiation and makeup of the contention free intervals to the plurality of stations so that any of the plurality of stations can independently initiate a transmission within the contention free interval,” as recited by claim 5.

On page 6 of the Office Action, the Examiner notes that “the phrases ‘can’ and ‘capable of’ recited in claims 1-3, 5, 6, 9, 20-21, and 10 are not positively recited claimed limitations. Therefore the limitations after the phrases are not considered the claimed limitations.”

The applicant respectfully submits that the limitations following the word “can” in claims 1 and 5 are positive claim limitations. It is not the case that the use of the phrases “can” and “capable of” necessarily renders the recited limitations that follow ineffective. By requiring that “the first station can be any of the plurality of stations,” claim 1 is limited to exclude alternate methods that do not meet this limitation. Therefore claim 1 does recite a positive claim limitation by reciting the phrase “the first station can be any of the plurality of stations,” despite its use of the word “can.” Similarly, by requiring “distributing control over the initiation and makeup of the contention free intervals to the plurality of stations so that any of the plurality of stations can independently initiate a transmission within the contention free interval,” claim 5 is limited to exclude alternate methods that do not meet this limitation. Therefore claim 5 does recite a positive claim limitation by reciting the phrase “any of the plurality of stations can independently initiate a transmission within the contention free interval,” despite its use of the word “can.”

During the interview (in response to question Q4 provided in advance) the Examiner clarified that by saying “the limitations after the phrases are not considered claimed limitations” the Examiner is not asserting that (a) the cited prior art can render these claims unpatentable even if the first station *cannot* be any of the plurality of stations, or if the plurality of stations *cannot* independently initiate a transmission within the contention free interval; but rather is asserting (b) the prior art *inherently* discloses that “the first station can be any of the plurality of stations” and that “any of the plurality of stations can independently initiate a transmission within the contention free interval.”

While Applicant submits that such limitations are not inherently present either explicitly or inherently in the cited references, Applicant respectfully points out that “the concept of inherency is not applicable to the question of obviousness.” *In re Sporman*, 363 F.2d 444, 150 USPQ 449 (CCPA 1965). To refer to an unexpected property or parameter as inherent begs the question of whether the unexpected property rebuts *prima facie* obviousness. Obviousness and inherency are entirely different questions; that which may be inherent is not necessarily known and, therefore, is an indication of unobviousness (*In re Sporman*, 363 F.2d 444, 449, 150 USPQ 449, 452 (CCPA 1965; see, also *In re Naylor*, 360 F.2d 765, 152 USPQ 106 (CCPA 1966); *In re Adams*, 356 F.2d 998, 148 USPQ 742 (CCPA 1966); and *In re Shetty*, 566 F.2d 81, 195 USPQ 753 (CCPA 1977)).

Applicant further submits that no proper combination of Yonge et al. and Sugar et al. teaches or suggests at least “having a first station that desires to establish a first session of regularly repeated contention free intervals broadcast information descriptive of the first session to the other stations,” as recited by claim 1.

On page 6 of the Office Action, the Examiner states that “Yonge et al. discloses a method/system ... comprising ... having a first station that desires to establish a first session of regularly repeated contention-free transmission intervals (see column 38 lines 5-8) broadcast information descriptive of the first session to the other stations and having other stations that receive the broadcast from the first station (see column 43 lines 34-49).”

The Examiner cites column 43 lines 34-49 for the for disclosure of broadcasting information describing the first session of regularly repeated contention-free intervals. This portion of Yonge et al. in fact discloses broadcasting of requests for routing information that facilitate the establishment of multi-hop transmissions between stations that do not communicate directly with each other. Specifically it discloses (Yonge et al. at column 43 lines 29-39):

Prior to communication with station B, station A learns how best to communicate with station B. This task is accomplished by through a learning process whereby station A transmits to each station in the network a frame that includes the Connection information request MAC management.... This request solicits information from each of the stations about that station's ability to communicate with station B. This request may be sent in a unicast frame transmission to each known station, or in a broadcast frame transmission to all stations that can hear station A.

These broadcasts disclosed in Yonge et al. have nothing to do with describing or establishing contention-free transmission intervals on a shared medium. During the interview, the Examiner agreed to reconsider the rejection of claim 1.

Dependent Claims 2-4, 6-8 and 10-54

These dependent claims are properly dependent on a respective one of the independent claims 1 and 5, and are thus allowable therewith. These dependent claims add one or more further limitations, which are not presently relied upon to establish patentability. For that reason, and not because Applicant agrees with the Examiner, no rebuttal is offered to the Examiner's reasons for rejecting these dependent claims.

Dependent claim 9

No proper combination of Yonge et al. and Sugar et al. teaches or suggests the subject matter of independent claims 1 and 5. This dependent claim is properly dependent on one of these independent claims, and is thus allowable therewith.

Additionally, this claim recites that "the contention free interval supports a plurality of transmissions, each using a different time segment within the contention free interval, so that a plurality of data streams can be transmitted using the contention free interval on a shared medium."

On page 7 of the Office action, the Examiner states that Yonge et al. suggests “the contention free interval supports a plurality of transmissions, each using a different time segment within the contention free interval, so that a plurality of data stream can be transmitted using the contention free interval, with each data stream generally assigned to one of the different time segments (see column 22 lines 39-48).” The cited portion of the Yonge et al. disclosure describes segmentation of data units or packets in a prioritized pre-emption scheme, not the segmentation of a time interval into time segments. It says (Yonge et al. column 22 lines 39-48):

When an MDSU is segmented into a number of segments, the segments are sent in a single burst, if possible, to minimize demands on the receiver resources and maximize throughput of the network, while still taking into account latency response and jitter performance. Segment bursting is accomplished by using Contention Control and Channel Access priority fields in the Frame Control, as discussed earlier with reference to FIG. 5B. A segment burst may be pre-empted by a station with a transmission of higher priority.

This has nothing to do with the method of sharing of reserved bandwidth that is described in claim 9. No proper combination of Yonge et al. and Sugar et al. teaches or suggests “the contention free interval supports a plurality of transmissions, each using a different time segment within the contention free interval, so that a plurality of data streams can be transmitted using the contention free interval on a shared medium.”

\$120 for the Petition for Extension of Time fee is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account Authorization. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 04838-075001.

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Respectfully submitted,

Date: December 20, 2007

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